

## SAFETY DATA SHEET (SDS)

SDS DATE : Aug, 2021

### Section 1. Product And Company Identification

1. **Product identifier**
  - 1.1. Product Name : OxiTec™ Glutathione (GSH/GSSG/Total) Assay Kit
  - 1.2. Product Code : BO-GLU-200
2. **Details of the supplier of the safety data sheet**
  - 2.1. Company: BIOMAX, Inc.,
  - 2.2. Address : Keumkang Penterium IX Tower CORE-C 7F, 46, Galmaesunhwan-ro 166beon-gil, Guri-si, Gyeonggi-do, Republic of Korea
  - 2.3. Telephone: +82-2-3296-3158
  - 2.4. Emergency Phone : +82-2-3296-3159
  - 2.5. FAX: +82-2-973-2858
3. **Product use**
  - 3.1. For research use only.

### Section 2. Hazard identification

Box	Component	Description	Volume	Safety Information
OxiTec™ Glutathione Assay Kit I	Assay Buffer I	Proprietary Buffer	60 ml	No hazards
	GSSG Standard (2mM)	Proprietary Buffer	2 ml x 1 vial	No hazards
	Glutathione Reductase(GR)	Proprietary Buffer	5 ml x 1 Bottle	No hazards
	NADPH	Lyophilized	1 Bottle	No hazards
	Chromogen (DTNB)	Contains DTNB	5 ml x 1 Bottle	See below
	Masking Reagents(M2VP)	Proprietary Buffer	2 ml x 1 vial	See below
OxiTec™ Glutathione Assay Kit II	Assay Buffer II	Proprietary Buffer	60 ml	No hazards
	GSSG Standard (2mM)	Proprietary Buffer	2 ml x 1 vial	No hazards
	Glutathione Reductase(GR)	Proprietary Buffer	5 ml x 1 Bottle	No hazards
	NADPH	Lyophilized	1 vial	No hazards
	Chromogen (DTNB)	Contains DTNB	5 ml x 1 Bottle	See below
	Masking Reagents(M2VP)	Proprietary Buffer	2 ml x 1 vial	See below

#### 1.1 **DTNB:**

##### **Emergency Overview**

**OSHA Hazards:** Irritant

**GHS Classification:** Skin irritation (Category 2)

Eye irritation (Category 2A)

Specific target organ toxicity – single exposure (Category 3)

**GHS Label elements, including precautionary statements**

**Pictogram:**



**Signal word:** Warning

**Hazard statement(s):** H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

**Precautionary statement(s):** P261 Avoid breathing dust/fumes/gas/mist/vapors/spray.

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P332+P313 If skin irritation occurs: Get medical advice/attention.  
 P337+P313 If eye irritation persists: Get medical advice/attention.

**HMIS Classification**

**Health hazard:** 2  
**Flammability:** 0  
**Physical hazards:** 0

**NFPA Rating**

**Health Hazard:** 2  
**Fire:** 2  
**Reactivity Hazard:** 0

**Potential Health Effects**

**Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation.  
**Skin:** May be harmful if absorbed through skin. Causes skin irritation.  
**Eyes:** Causes eye irritation.  
**Ingestion:** May be harmful if swallowed.  
**Aggravated Medical Condition:** Avoid contact w/DMSO solutions containing toxic materials or materials with unknown toxicological properties. DMSO is readily absorbed through skin and may carry such materials into the body

1.2 **M2VP :**

**Emergency Overview**

**GHS Classification:** Skin corrosion/irritation (Category 2)  
 Serious eye damage/eye irritation (Category 2)  
 Specific target organ toxicity - single exposure (Category 3), Respiratory system

**GHS Label elements, including precautionary statements**

**Pictogram:**



**Signal Word:** Warning

**Hazard statement(s):** H315: Causes skin irritation  
 H319: Causes serious eye irritation.  
 H335: May cause respiratory irritation.

**Precautionary statement(s):** P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
 P264 - Wash exposed skin thoroughly after handling  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
 P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.  
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P321 Specific treatment (see supplemental first aid instructions on this label).  
 P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
 P337 + P313 If eye irritation persists: Get medical advice/ attention.  
 P362 + P364 Take off contaminated clothing and wash it before reuse.  
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
 P405 Store locked up.  
 P501 Dispose of contents and container according to wastes control act.

**HMIS Classification**

**Health hazard:** 3  
**Chronic health hazard:** \*  
**Flammability:** 0  
**Physical hazards:** 3

**NFPA Rating**

**Health Hazard:** 3  
**Fire:** 0  
**Reactivity Hazard:** 0

**Section 3. Composition/Information on ingredients**

Component	CAS Number	EC-No.	Molecular Weight	Formula
DTNB	69-78-3	200-714-4	396.35	C <sub>14</sub> H <sub>8</sub> N <sub>2</sub> O <sub>8</sub> S <sub>2</sub>

M2VP	339530-78-8	-	269.24	☞H10F3NO3S
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#### Section 4. First Aid Measures

**General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact:** Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed:** DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### Section 5. Fire-fighting Measures

**Condition of flammability:** Not flammable or combustible.

**Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for fire-fighters:** Wear self-contained breathing apparatus for firefighting if necessary.

**Hazardous combustion products:** Hazardous combustion products formed under fire conditions— no data available.

#### Section 6. Accidental Release Measures

**Personal precautions:** Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation.

Evacuate personnel to safe areas. Avoid breathing dust.

**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided.

**Methods for cleaning up:** Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

#### Section 7. Handling And Storage

##### Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion-proof equipment. Keep away from sources of ignition (no smoking).

Take measures to prevent the buildup of electrostatic charge.

##### Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: 4°C.

#### Section 8: Exposure Controls/Personal Protection

Contains no substances with occupational exposure limit values.

##### Personal protective equipment

###### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

###### Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

###### Eye protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

###### Skin and body protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

###### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Section 9: Physical And Chemical Properties

Property	DNTB	M2VP
Appearance:	Pale Yellow liquid	Transparent liquid
pH:	No data available	No data available
Water Solubility:	No data available	No data available
Other Solubility:	No data available	No data available
Boiling Point (°C):	No data available	No data available
Melting Point (°C):	240-250°C (464-473°F)	103°C-110°C
Flash Point (°C):	No data available	No data available
Ignition Temperature (°C):	No data available	No data available
Density:	No data available	Clear liquid

**Section 10: Stability And Reactivity**

Property	DNTB	M2VP
<b>Chemical Stability:</b>	Stable under recommended storage conditions	
<b>Conditions to Avoid:</b>	No data available	No data available
<b>Materials to Avoid:</b>	Strong oxidizing agents, strong bases	Strong oxidizing agents
<b>Hazardous decomposition: products:</b>	Carbon oxides, nitrogen oxides, sulfur oxides	Carbon oxides, nitrogen oxides, sulfur oxides, Hydrogen fluoride

**Section 11: Toxicological Information****DTNB:**

**Acute toxicity:** LD50 Intraperitoneal – mouse – 2,080 mg/kg

**Skin corrosion/irritation:** no data available

**Serious eye damage/eye irritation:** no data available

**Respiratory or skin sensitization:** no data available

**Germ cell mutagenicity:** no data available

**Carcinogenicity:**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** no data available

**Teratogenicity:** no data available

**Specific target organ toxicity – single exposure (GHS):** no data available

**Specific target organ toxicity – repeated exposure (GHS):** no data available

**Potential Health Effects**

**Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation.

**Skin:** May be harmful if absorbed through skin. Causes skin irritation.

**Eyes:** Causes eye irritation.

**Ingestion:** May be harmful if swallowed.

**Signs and Symptoms of Exposure:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Additional information:** RTECS: DG9650000

**M2VP:**

**Acute toxicity:** no data available

**Skin corrosion/irritation:** no data available

**Serious eye damage/eye irritation:** no data available

**Respiratory or skin sensitization:** no data available

**Germ cell mutagenicity:** no data available

**Carcinogenicity:**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** no data available

**Teratogenicity:** no data available

**Specific target organ toxicity – single exposure (GHS):** no data available

**Specific target organ toxicity – repeated exposure (GHS):** no data available

**Aspiration hazard:** no data available

**Potential Health Effects**

**Inhalation:** May cause respiratory irritation.

**Skin:** May be harmful if absorbed through skin. Causes skin burns.

**Eyes:** Causes eye burns.

**Ingestion:** Harmful if swallowed.

**Signs and Symptoms of Exposure:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Additional Information:** RTECS: not available

**Section 12: Ecological Information**

**Persistence and degradability:** no data available

**Toxicity:** Do not empty into drains. Do not flush into surface water or sanitary sewer system.

**Bioaccumulative potential:** no data available

**Mobility in soil:** no data available

**PBT and vPvB assessment:** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**Other adverse effects:** no data available

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#### Section 13: Disposal Considerations

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**Product:** Observe all federal, state, and local environmental regulations. Contact licensed professional waste disposal service to dispose of this material.

**Contaminated packaging:** Dispose of as unused product.

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#### Section 14: Transport Information

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**DOT (US):** Not dangerous goods.

**IMDG:** Not dangerous goods.

**IATA:** Not dangerous goods.

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#### Section 15: Regulatory Information

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1. **Regulation under the Occupational Safety and Health Act**
    - 1.1 Harmful Substances Required Permission for Manufacture - Not relevant
    - 1.2 Harmful Substances Prohibited from Manufacturing - Not relevant
    - 1.3 Carcinogenic Substances - Not relevant
    - 1.4 Controlled Substances Subject to Environment Monitoring - Not relevant
    - 1.5 Controlled Substances Subject to Health Examination - Not relevant
    - 1.6 Hazardous substances requiring management - Not relevant
  2. **Act on the Registration and Evaluation, etc. of Chemical Substances, Chemicals Control Act**
    - 2.1 Toxic Chemicals - Not relevant
    - 2.2 Observational chemicals - Not relevant
    - 2.3 Restricted Chemicals - Not relevant
    - 2.4 Prohibited Chemicals - Not relevant
    - 2.5 Accident Precaution Chemicals - Not relevant
  3. **Dangerous Substances Safety Management Act**
    - 3.1 Not relevant
  4. **Wastes Control Act**
    - 4.1 Follow article 13 of the act to dispose the product waste
  5. **Other regulations**

KECI Number  
Not in compliance with the inventory
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#### Section 16: Other information

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**OTHER INFORMATION:**

**PREPARATION INFORMATION:**

**DISCLAIMER:**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions.

It does not represent any guarantee of the properties of the product. BIOMAX, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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